

THE UNIVERSITY OF ALBERTA
NORTH GARNEAU DEVELOPMENT



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NORTH GARNEAU DEVELOPMENT

JUNE 1968
BITTORF PINCKSTON - PLANNING CONSULTANTS



MINISTER OF PUBLIC WORKS
ALBERTA

Edmonton

29th May, 1968.

Dr. W.H. Johns,
President,
University of Alberta,
Edmonton, Alberta.

Dear Dr. Johns,

On behalf of this Department and the Government of the Province of Alberta, I would like to present this Master Plan document covering the development of the North Garneau Extension to the University of Alberta Campus.

As you are aware, the year to year requirements of our Universities must be constantly assessed and evaluated. The design concept, as outlined in this report prepared by Bittorf Pinckston Planning Consultants, is therefore based upon growth and change. The aim has been to develop an organizational approach which will remain constant for the foreseeable future and form a framework within which future University facilities can be developed. Further detailed reports, already underway, will be ready during the next year and form an essential part of this scheme. Careful planning must continue to guide campus expansion.

I am sure that with the guidance of proposals such as outlined in this study the North Garneau area will become an outstanding example of campus planning and architecture.

Yours very truly,

A handwritten signature in dark ink, appearing to read 'F.C. Colborne', written over a horizontal line.

F.C. COLBORNE.
Minister of Public Works.

ACKNOWLEDGEMENTS

The creation of a development plan requires a team effort; unfortunately, it is impossible to mention all who contributed to the project. However, we are particularly indebted to Dr. W. H. Worth, Vice-President for Campus Planning and Development and Mr. W. Hiller, Director, the Campus Development Office who supplied much of the information, and provided the liaison with the many diverse groups which make up the university.

We are also indebted to the following people:

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University Planning Consultant;

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University Traffic Consultants;

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INTRODUCTION

During the past ten years The University of Alberta has maintained a rate of growth of about 12% annually. If growth continues at this rate the University is expected to reach an enrolment of 21,500 full-time students during the academic session 1972/73. To accommodate this prospective growth, the Campus Planning Committee, on April 5th, 1962, recommended the acquisition of property in North Garneau, from 87th Avenue North to the North Saskatchewan River between 112th and 110th Streets.

The first stages of this acquisition have been accomplished and the following building programme is scheduled for the area:

Academic facilities for —

Agriculture

Business Administration and Commerce

Fine Arts

Humanities and Social Sciences

Law

Library (Humanities and Social Science Collection)

Residential facilities for 2500 students

Parking facilities for 2500 cars.

In the development of this proposal the aim is to establish a number of guiding principles, rather than to illustrate a detailed and specific plan of future buildings. The basic objective is the establishment of a method of organization which will remain constant for the future, and which will form the basis for decisions about the various facilities, while at the same time producing a group of buildings which will exhibit individual characteristics within a consistent over-all design. This report by Bittorf Pinckston outlines the proposed Development Plan of North Garneau, and factors which influenced this proposal.

Walter H. Johns, President

LOCATION

With the development of The University of Alberta, The Health Sciences Center, and the high density residential-commercial facilities in South Garneau, the university sector is becoming a major area of activity in the city, distinct from the central business district. The North Saskatchewan River valley emphasizes these two centers, each being visually identifiable from the surrounding areas.

Traffic and Transit

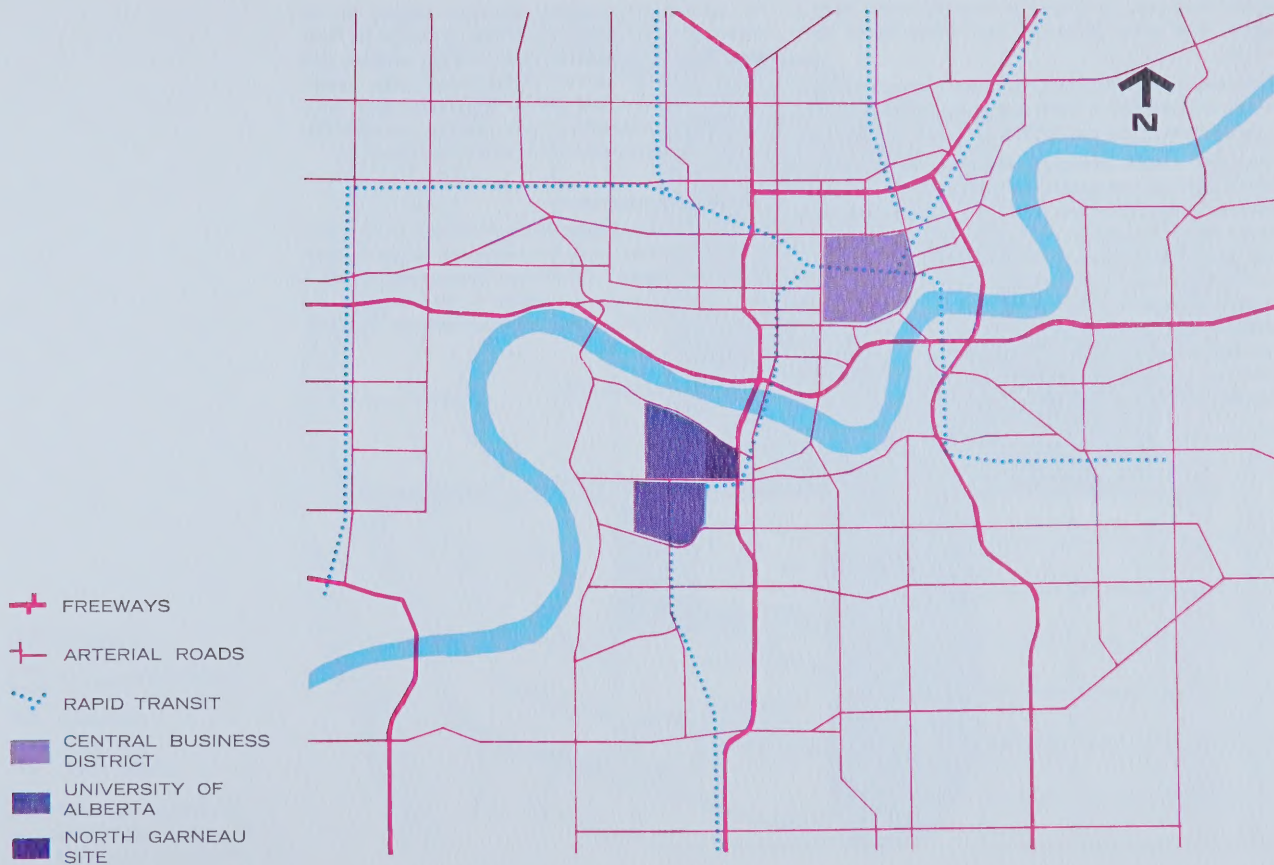
Expansion of academic, hospital, and residential facilities will lead to increased problems of traffic congestion and parking in the area.

The road system has been investigated both by local and city authorities, with a view to ensuring better access to and from the university as well as determining the parking requirements.

The Metropolitan Edmonton Transportation Study's proposed roadway system for the university area consists of

- a) A limited access freeway between 109 Street and 110 Street. This is to be a major freeway corridor serving the downtown area.
- b) A series of major arterials which are to provide access to the University from Groat Bridge, the Quesnell freeway system, and the proposed freeway.

Proposals for a rapid transit system, possibly to be realized by 1970-71, are currently being considered, which would improve the service between the university and the city core. These future developments would require a transfer terminal located on or near the university to connect the suburban buses with either an express bus service or a rapid transit service to the city core. The Bechtel Report recommendation on rapid transit system is illustrated.



SITE

North Garneau, consisting of approximately forty acres, is a major sector of The University of Alberta.

The site, one of Edmonton's older residential districts, is divided by a rectilinear road pattern visually accentuated by the landscaping.

The site slopes gradually from south to north terminating at the south bank of the North Saskatchewan River. The bank provides park and recreational areas, as well as an unrestricted view of the city core. The east boundary on the site, 110 Street, and the proposed freeway, will create problems of noise and access. To the south is 87 Avenue and existing and potential high-rise commercial and residential development. To the west is the existing campus, providing opportunities for physically and visually linking the proposed to the existing.

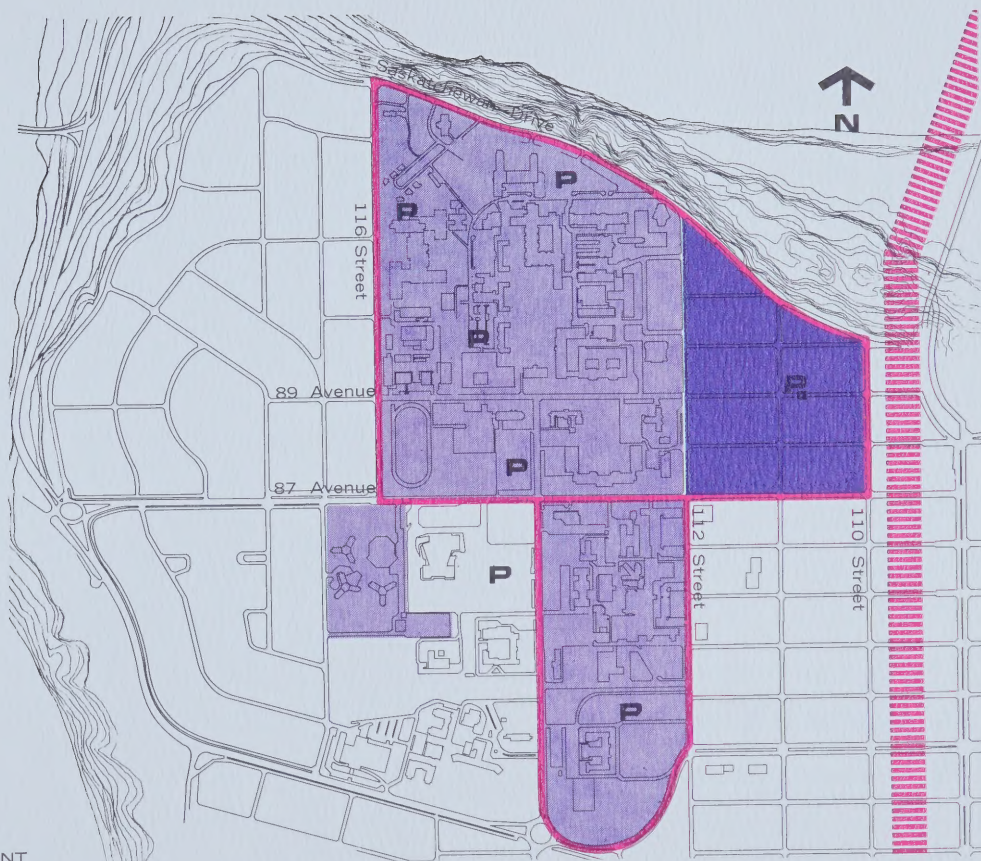
To provide the required vehicular access to the university, the university traffic consultants have proposed a peripheral road system around the campus along Saskatchewan Drive, 110 Street, 87 Avenue, and 116 Street. The Traffic and Parking Study established that parking facilities for 2500 cars are required in North Garneau.

Climatic Considerations

The University Winter Session occurs in the season of extremely cold temperatures; however, with Summer Session enrollment increasing, seasonal extremes must be considered in providing for the comfort of pedestrians moving between facilities.

UNIVERSITY DISTRICT

-  FREEWAY
-  PERIMETER ROAD
-  PARKING
-  PARKING
2500 CARS
-  NORTH GARNEAU
-  UNIV. OF ALBERTA &
HEALTH SCIENCES CENT.



THE PROBLEM STATEMENT

Diversity of academic disciplines characterizes the university. Therefore, in order to establish a system for controlling the development of physical facilities, common denominators must be ascertained.

The decision to accommodate academic, residential, and parking facilities in North Garneau can be assumed to be relatively constant; however, quantitative and qualitative considerations are subject to change in the course of time. For the development of the proposed concept, two factors common to all university activities are considered to be the process of communication and the principle of growth and change.

The Process of Communication

Communication, i.e., the transferral of information, is common to all university activities, whether these be person to person, person to group, inter-group, person to media, or group to media. The programmed courses of study are the major sources of information but the process of communication must also include informal contact and activities beyond those which are programmed. Two areas of concern are the establishment of common meeting places and the movement of people between activities.

The Principle of Growth and Change

"The future of an organization so complex and liable to change as a university can never be predicted except within broad limits. However, the rate of growth of universities is so rapid that one must begin planning now for the needs of a decade hence. Our aim has been to establish a framework for growth which will ensure development at the required speed; to predict provisions for the future and provide a workable version for the first phase of construction."¹

Thus, within the principles of growth and change there is concern for two issues: the need to establish an orderly pattern of growth of the physical

¹Simon Fraser Development Plan.

THE PROBLEM STATEMENT

facilities, and the need for flexibility within these facilities to accommodate innovation or change. The physical implications of innovation will be considered with the detailed development of facilities. In establishing the proposed framework, however, the primary concern is with growth; that is, with the physical process by which expansion takes place. The problem, then, becomes one of establishing

- (i) points at which growth occurs,
- (ii) the direction of growth, and
- (iii) the sequence of growth, both in terms of short range forecast (dealing with immediate requirements) and long range forecast (dealing with patterns and trends).

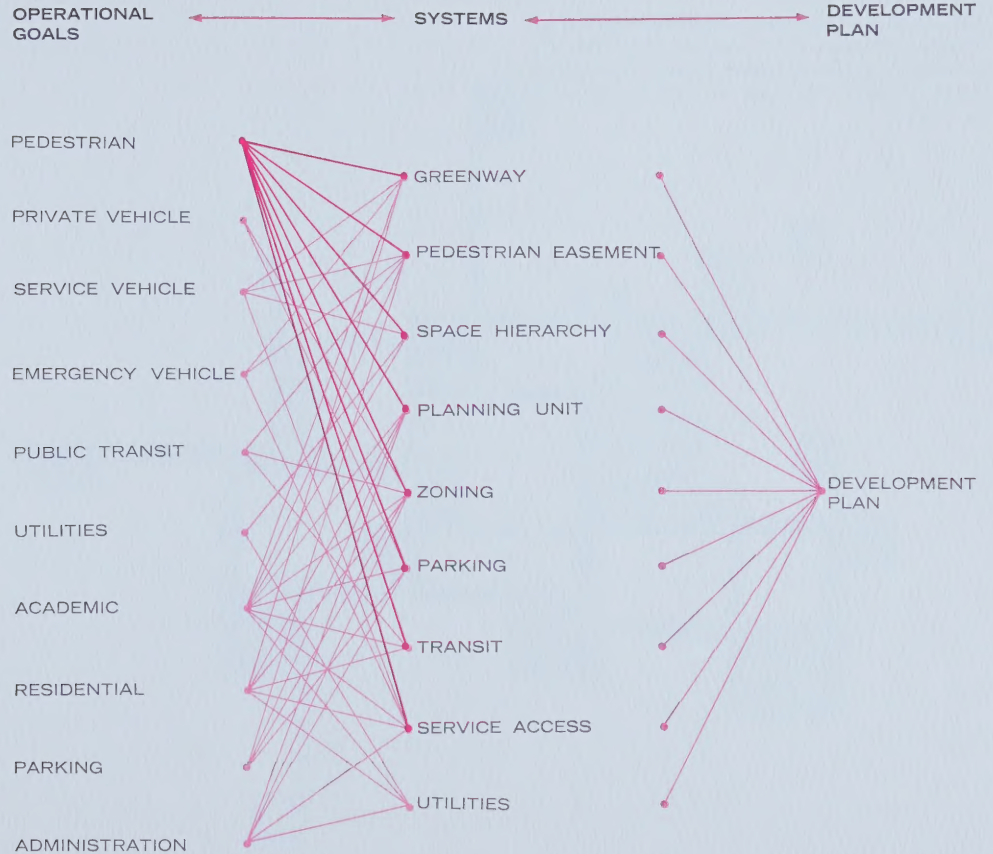
PLANNING OBJECTIVES

The basic planning objective is the development of a three dimensional organization of academic, residential, and parking facilities. The resulting development plan is based on a framework of communication and growth allowing for further assessment of future decisions based on

- a) qualitative values, i.e., desired environment conditions, such as the character of the external spaces between existing and proposed facilities suggested in the Development Plan;
- b) quantitative measures based on specific facilities which can only be determined in the future;
- c) architectural form determined by specific future functions, by desired environmental conditions, and by the then available building technology.

Any long-range plan involves a time dimension and is therefore, subject to a continuous cycle of feed-back and re-evaluation. In order to provide a context for decision making with respect to the Development Plan, it is necessary to define the operational goals. These are a set of desired physical conditions or requirements which are not determined by changes in academic policy, enrollment, or financial programs but are part of the over-all university policy. The operational goals are to be achieved through the application of a series of systems. The systems, several of which are required to attain each operational goal, are the ordering devices which provide a discipline for implementation of the Development Plan.

Almost all the systems developed, directly affect the goal of pedestrian safety, convenience and comfort. Two systems which provide the basis for the desired pedestrian environment are the greenway principle, and the pedestrian easement.

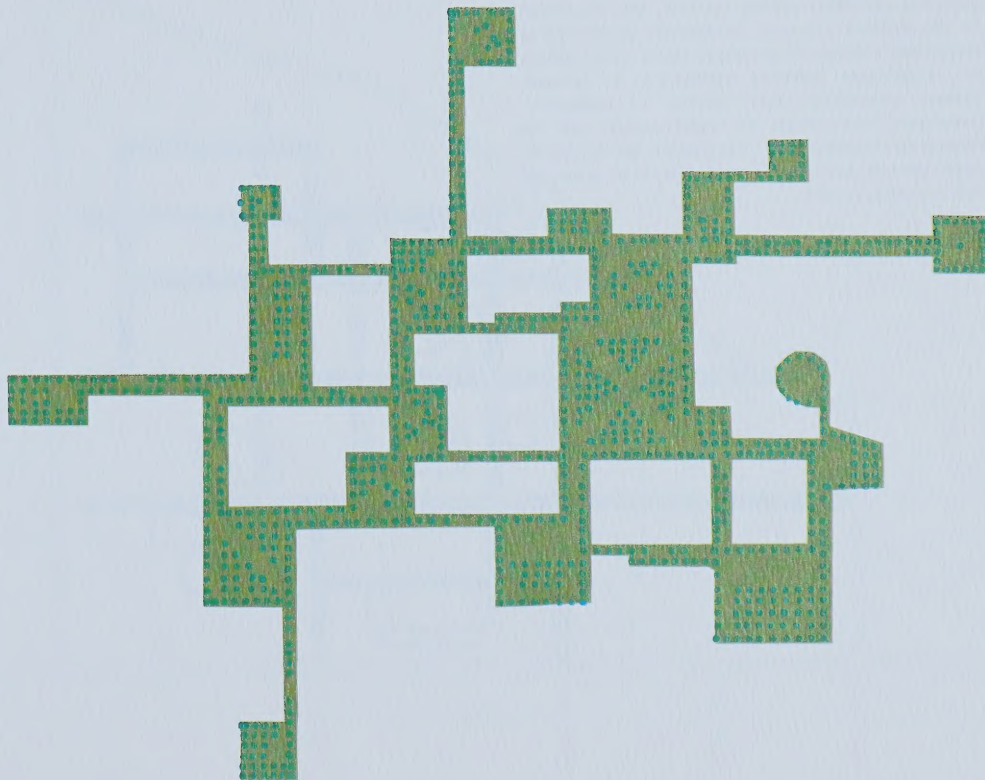


PLANNING OBJECTIVES

The Greenway Principle:

This is a structuring device which integrates the old and the new parts of the campus by means of a continuous system of open spaces. Landscaped pedestrian ways link important focal points within the campus.

THE GREENWAY PRINCIPLE

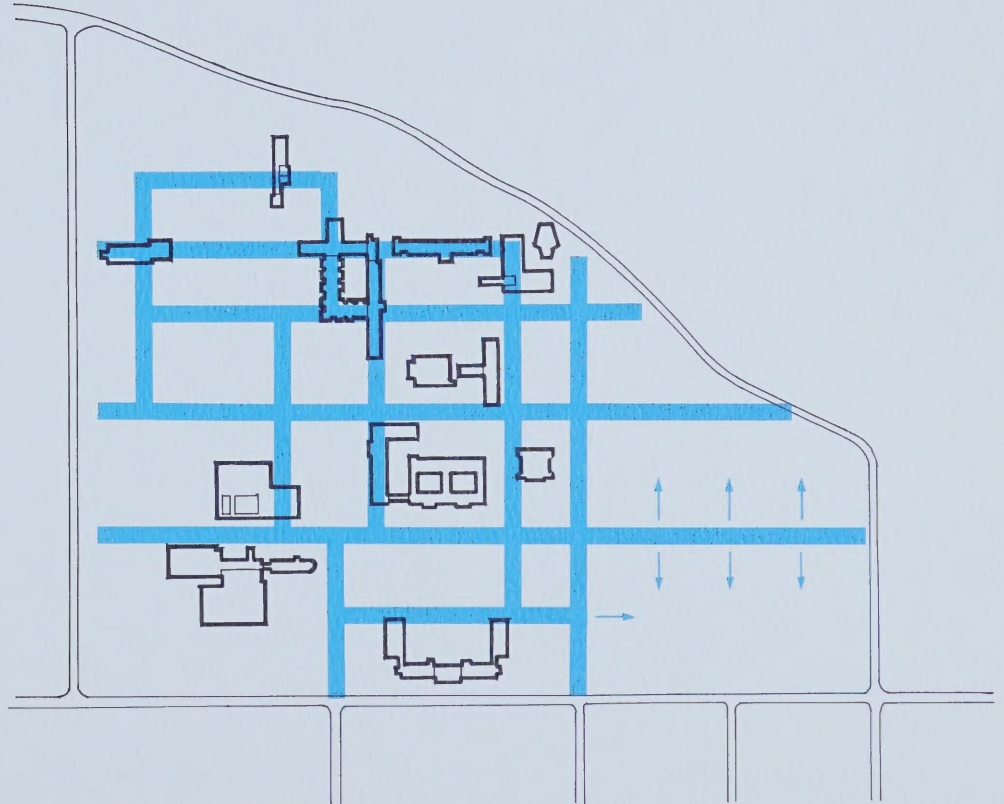


PLANNING OBJECTIVES

The Pedestrian Easement:

This is an internal system of pedestrian movement complementary to the greenway system. The potential geometry of the network was identified on the existing campus. It provides a network of pedestrian movement at second level, which allows for continuous external movement at ground. Spaces generating large volumes of pedestrian movement and places of social activity will be related to these streets. This system will be developed, part by part, as separate phases of construction are undertaken.

PEDESTRIAN EASEMENT



PHYSICAL CONCEPT

The physical concept is an interpretation of the operational goals and systems set within the context of site conditions.

The source of this interpretation is the idea that the diversity of university activities and disciplines when confined within the boundaries of a pedestrian precinct results in an urban, highly compact campus form. The coherence and order of such a form will depend on the implementation of a particular pattern of growth, based on pedestrian movement.

To begin with, a series of movement nodes or points at which people will collect and disperse, can be developed along 112 Street at the intersection of pedestrian routes entering North Garneau, defined by the existing campus buildings and the proposed transit terminal near 87 Avenue. These nodes have the potential of becoming centers of activities or growth points for academic facilities.

It has been established that there is no particular center to the campus but rather a series of sub-centers or activity nodes. The two major activity nodes — the Administration — Student Union — Physical Education complex and the Cameron Library — are basically non-scheduled activities used by a large cross section of the university population. They are major generators of pedestrian movement and serve as points of orientation within the campus. A third major activity node to complete a triangle, defining the heart of the campus, is to be located at the intersection of 112

Street and 89 Avenue. This center consisting of the Humanities-Social Science Library and a food service, is approximately equidistant from those on the existing campus and is related to the major terminus of a pedestrian mall along 89 Avenue from the Student Union-Physical Education complex.

In terms of optimum use of land, it is impossible to locate all nodes along 112 Street. Therefore, an additional series of nodes are to be established along 89 Avenue extending east from the major activity node. This geometry minimizes the conflict between the growth pattern of facilities located along 89 Avenue and 112 Street.

The nodes along 112 Street, particularly north of 89 Avenue, are in a more central campus location. Therefore, facilities and departments assigned to these nodes should have a wide campus use. The facilities assigned to nodes along 89 Avenue should be relatively independent and self-contained because of the more peripheral position in relation to the over-all campus. Also, these facilities should have a relatively high service need. Fine Arts, Humanities as well as the Humanities-Social Science Library are located along 112 Street, while Law, Commerce, and Agriculture are located along 89 Avenue.

NODES & SERVICE ACCESS

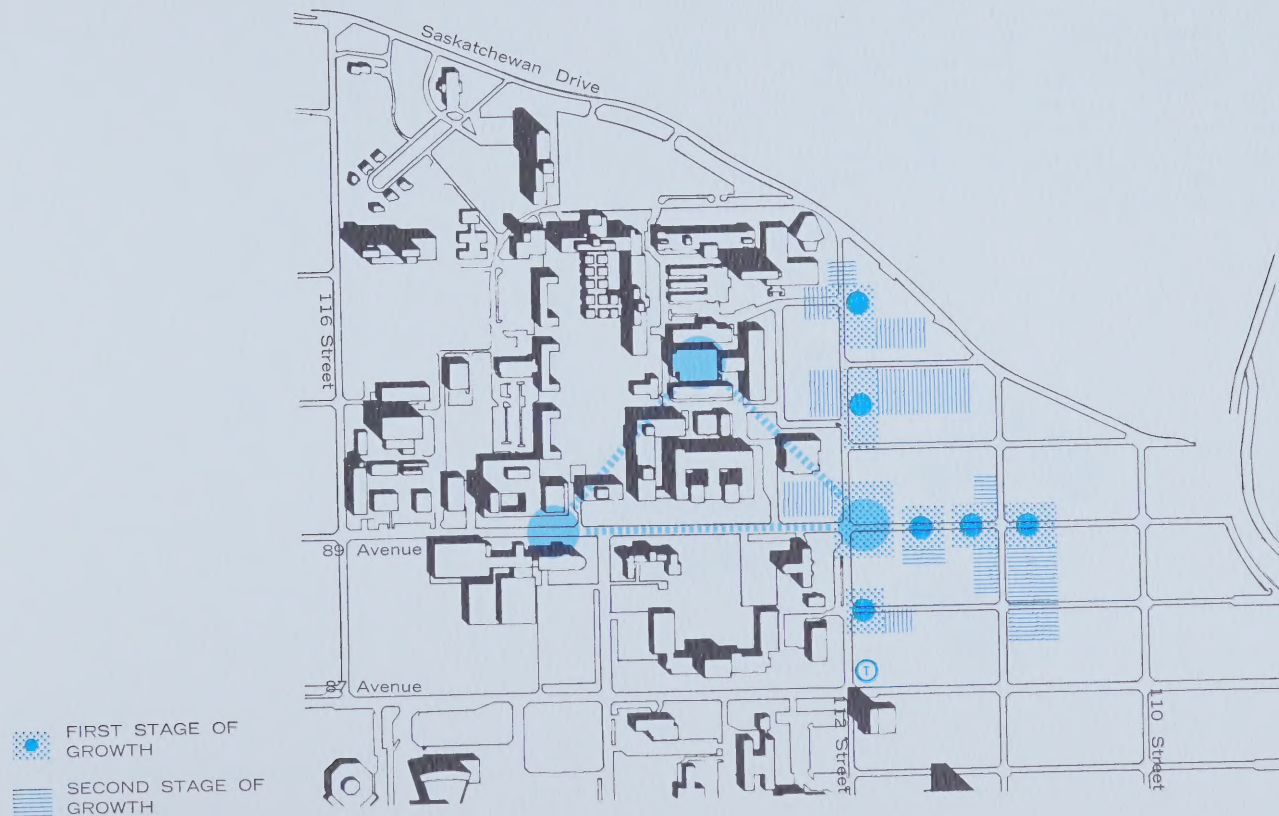


PHYSICAL CONCEPT

The first major stage of growth of facilities and departments should establish links between the nodes. This will then provide an enclosed pedestrian connection between facilities.

Later stages of growth will grow out from the nodes perpendicular to the axis generated in the earlier stages.

GROWTH STAGES



PHYSICAL CONCEPT

The stages of growth establish the general form of the pedestrian easement and the greenway system. The pedestrian easement will have a rectilinear geometry, based primarily on the 112 Street and 89 Avenue axes. The diagonal geometry of the greenway is derived from the open space created by the growth pattern of facilities on the two major axes. Though individual open spaces may be rectilinear, they will be connected primarily on the corners, contributing to a diagonal pedestrian movement pattern.

GREENWAY SYSTEM & PEDESTRIAN EASEMENT



PHYSICAL CONCEPT

Housing locations are established within the framework of the greenway system and pedestrian easement. Residential facilities have been used to define the campus edges; for example, housing facilities terminate the major diagonal greenways extending from the Humanities-Social Sciences Library, and the third housing complex terminates the 89 Avenue axis.

Parking Facilities are to be located in the greenway system in order to conform to three major conditions: that they (a) be related to major centers of activity; (b) be readily accessible to the perimeter road; (c) be constructed independently of the academic or housing facilities.

HOUSING & PARKING LOCATIONS



PHYSICAL CONCEPT

The use of significant building forms to terminate vistas or visual axes has controlled, in part the three-dimensional form of the physical concept; for example, a proposed 89 Avenue mall from the Student Union-Physical Education complex is terminated by the Humanities-Social Science Library. Alternatively a mall is to be formed by the Fine Arts and the Humanities facilities to extend the axis focused on the symmetrical east facade of the old Arts Building.

PLAN-AXES DIAGRAM

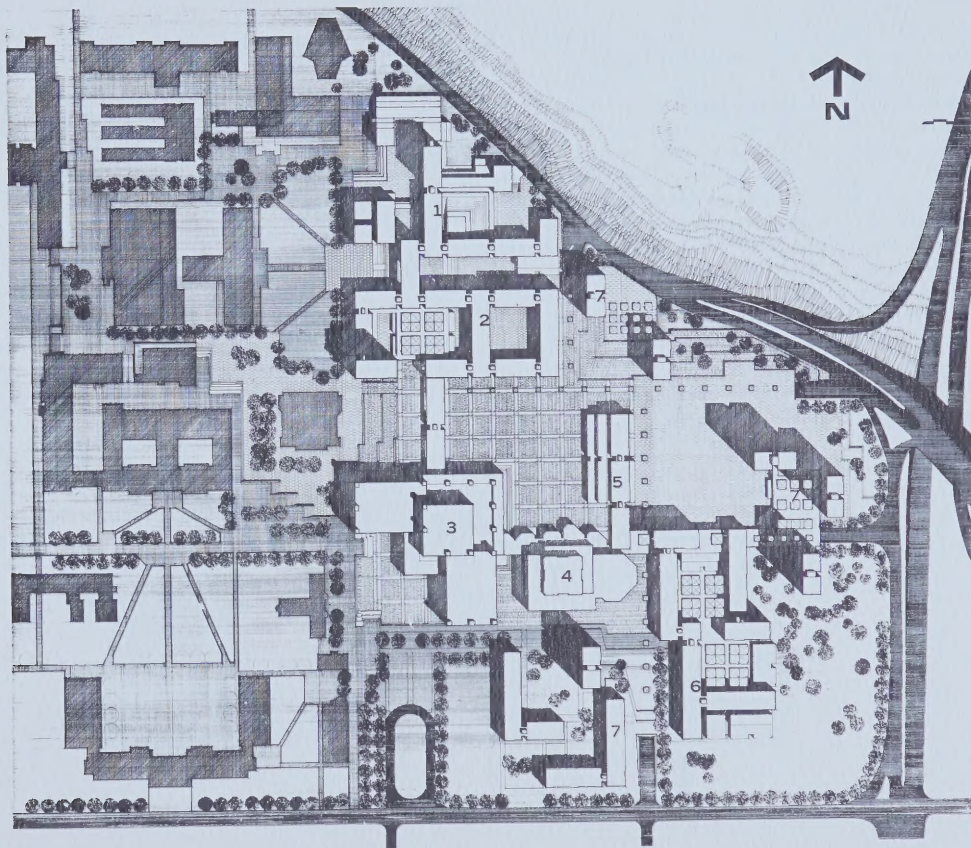


DEVELOPMENT PLAN

The Development Plan expresses the desired character of the completed project. It illustrates proposed land use in terms of building locations, landscaping, and circulation systems. To allow for flexibility in future decisions, independent zones have been established for academic, residential, and parking facilities. Details of the three-dimensional form of these facilities will be developed through four planning systems which will form the infrastructure and should remain constant in the foreseeable future.

DEVELOPMENT PLAN

- 1 FINE ARTS
- 2 HUMANITIES
- 3 LIBRARY
- 4 LAW
- 5 COMMERCE
- 6 AGRICULTURE
- 7 HOUSING



DEVELOPMENT PLAN

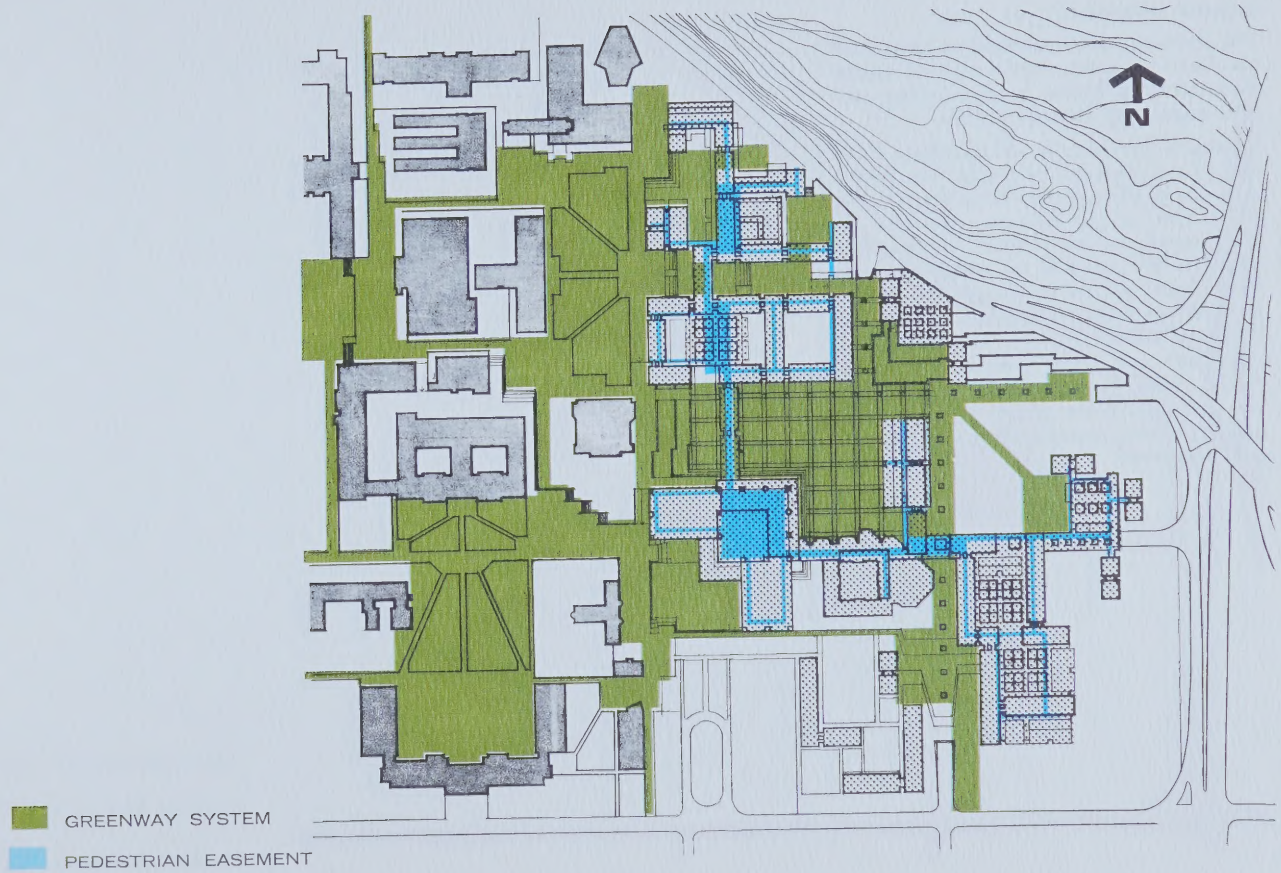
Greenway System

The greenway principle — a series of linked open spaces each with individual character — is intended to enhance particular functions for which the spaces may be used to set off the surrounding buildings. Some spaces may be paved to accommodate large numbers of people, while others may be quiet, landscaped areas. They may be linked by openings through the buildings. Pedestrian movement axes such as 89th Avenue will be accentuated by a linear arrangement of trees and by paving materials. The greenway offers an opportunity to integrate the old campus with the proposed development. For example, the Rutherford Library, the proposed Humanities-Social Sciences Library and the Humanities facilities define a space which extends both into the existing campus and North Garneau through the use of a common paving pattern.

Pedestrian Easement

The Pedestrian Easement provides a protected pedestrian system within the academic facilities. The major vertical circulation system, stairs and elevators will be located at the junctions of the external and internal movement systems. Lounges, lecture theatres, and other facilities generating large volumes of pedestrian movement will be located along the Pedestrian Easement concentrated at the nodes.

GREENWAY SYSTEM & PEDESTRIAN EASEMENT



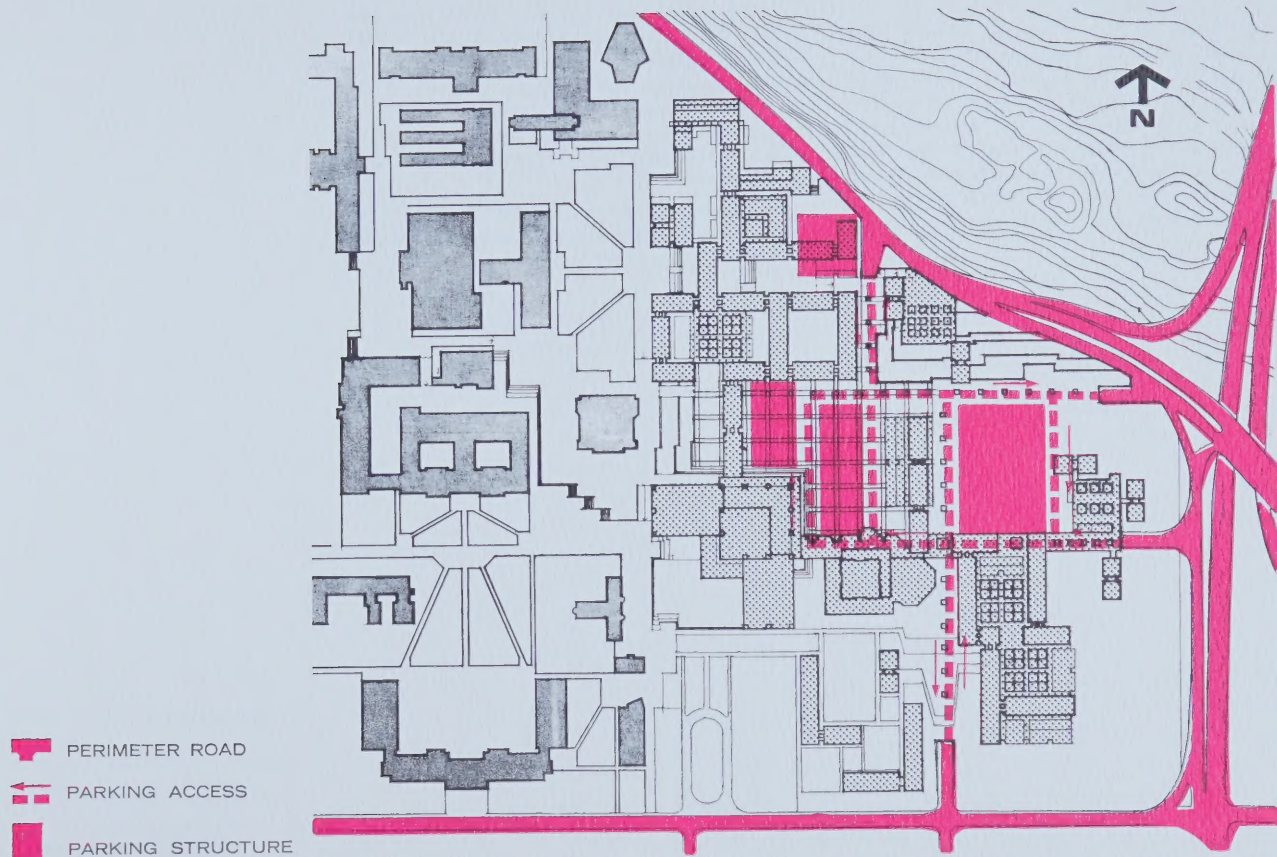
DEVELOPMENT PLAN

Vehicular Movement

The proposed system establishes North Garneau as a pedestrian precinct with the gradual transition from surface to underground vehicular routes and parking facilities.

Parking is provided for approximately 2,500 cars in the proposed structures. The system conforms to the conditions of optimum accessibility both to the perimeter road and the major activity centers of North Garneau. The structures are linked to the pedestrian easement system, and the top decks will be utilized as major spaces in the greenway system. The structures are not integrated with other facilities so as to allow independent phasing. Access roads, linking these structures to Saskatchewan Drive, 110 Street and 87 Avenue are depressed allowing separate pedestrian and vehicular movement.

VEHICULAR MOVEMENT



DEVELOPMENT PLAN

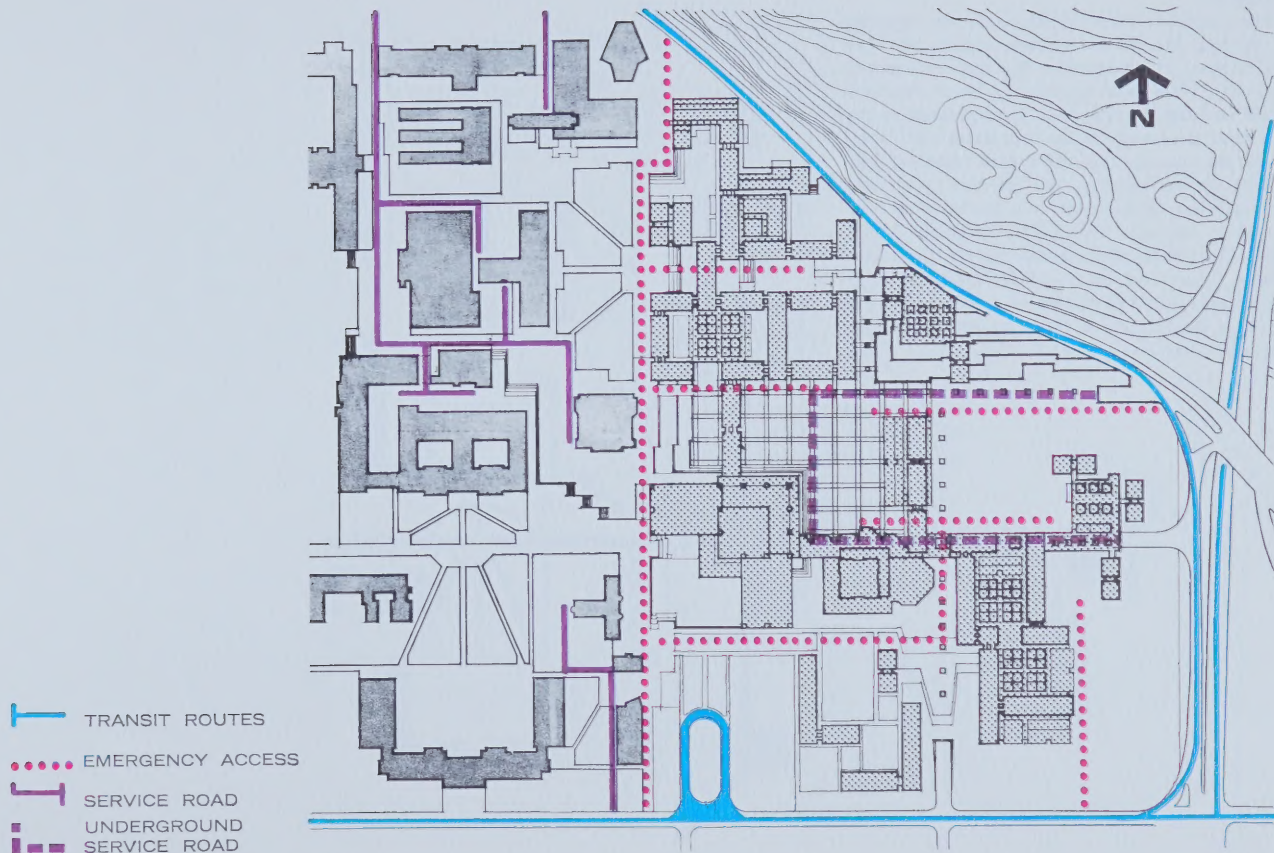
Vehicular Movement

The transit terminal, which will function as a connection between suburban buses to either express buses or to the future rapid transit system, is proposed at 112 Street and 87 Avenue. This terminal loop, with access limited to transit vehicles, is to connect to the major campus pedestrian movement along 112 Street and 87 Avenue. Additional transit service can be provided by a local route on the peripheral road.

The service route can be located along 89 Avenue axis serving those facilities with high service needs, i.e., Library, Law, Agriculture, Food Services and Housing. The route is depressed as part of the parking access route, being incorporated in the phasing growth of the spine. Other facilities can be served from the peripheral road.

Access to all buildings for fire trucks and ambulances is provided on the external pedestrian ways. Ramps occur at changes in level.

VEHICULAR MOVEMENT

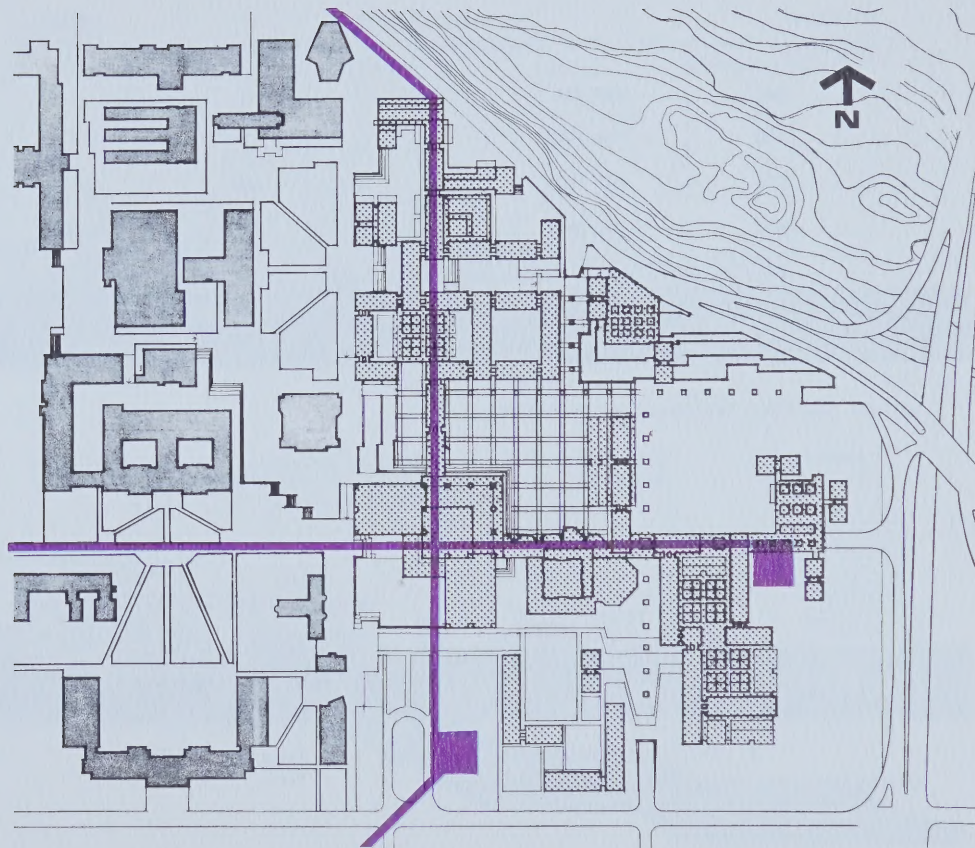


DEVELOPMENT PLAN

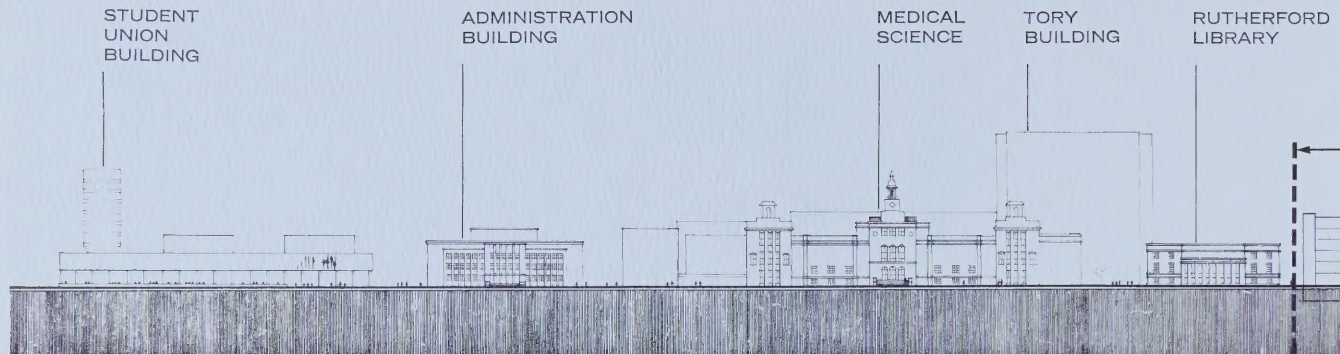
Utilities

The university energy consultants are currently studying the overall utilities system for The University of Alberta and The Health Sciences Center. The basic system for North Garneau will consist of main lines, incorporated in the phased growth of the building along 112 Street and 89 Avenue. The 112 Street route will connect to the existing services tunnel at Saskatchewan Drive. It will provide a direct connection between The Health Sciences Center and the cooling plant located at the Saskatchewan River, and to the electrical sub-station proposed for 112 Street and 87 Avenue. A future heating plant could be located at the eastern terminus of 89 Avenue.

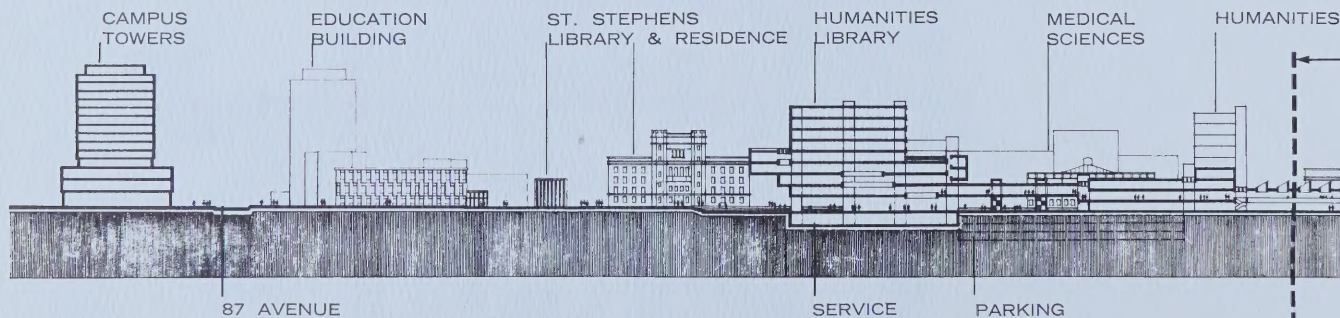
MAJOR UTILITY ROUTES



SECTIONS OF PLAN

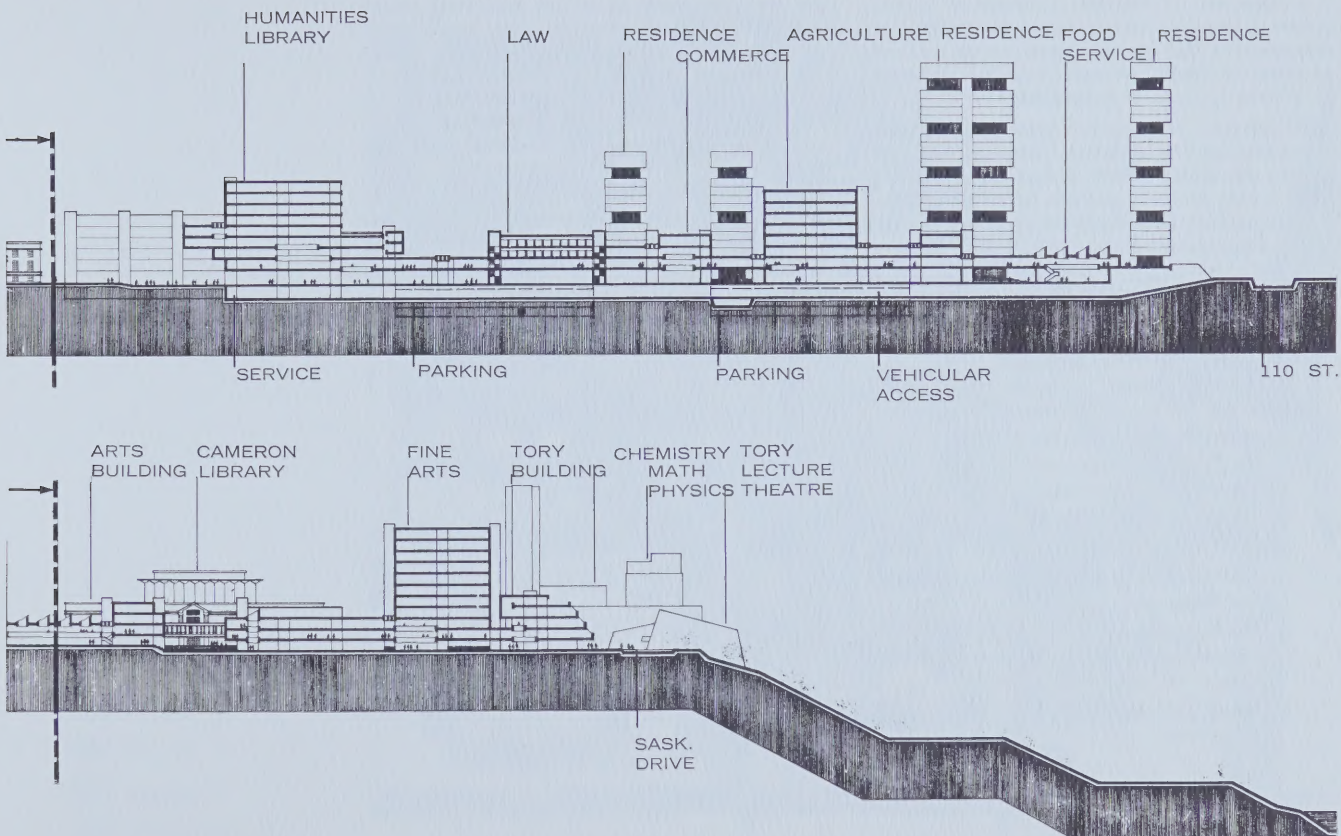


CROSS SECTION THROUGH 89TH AVENUE



CROSS SECTION THROUGH 112TH STREET

SECTIONS OF PLAN



CONCLUSIONS

It is necessary to establish a pattern of orderly growth in terms of time, in which the addition or expansion facilities will not necessitate the frequent relocation of others. At each stage it is desirable to achieve a sense of completion.

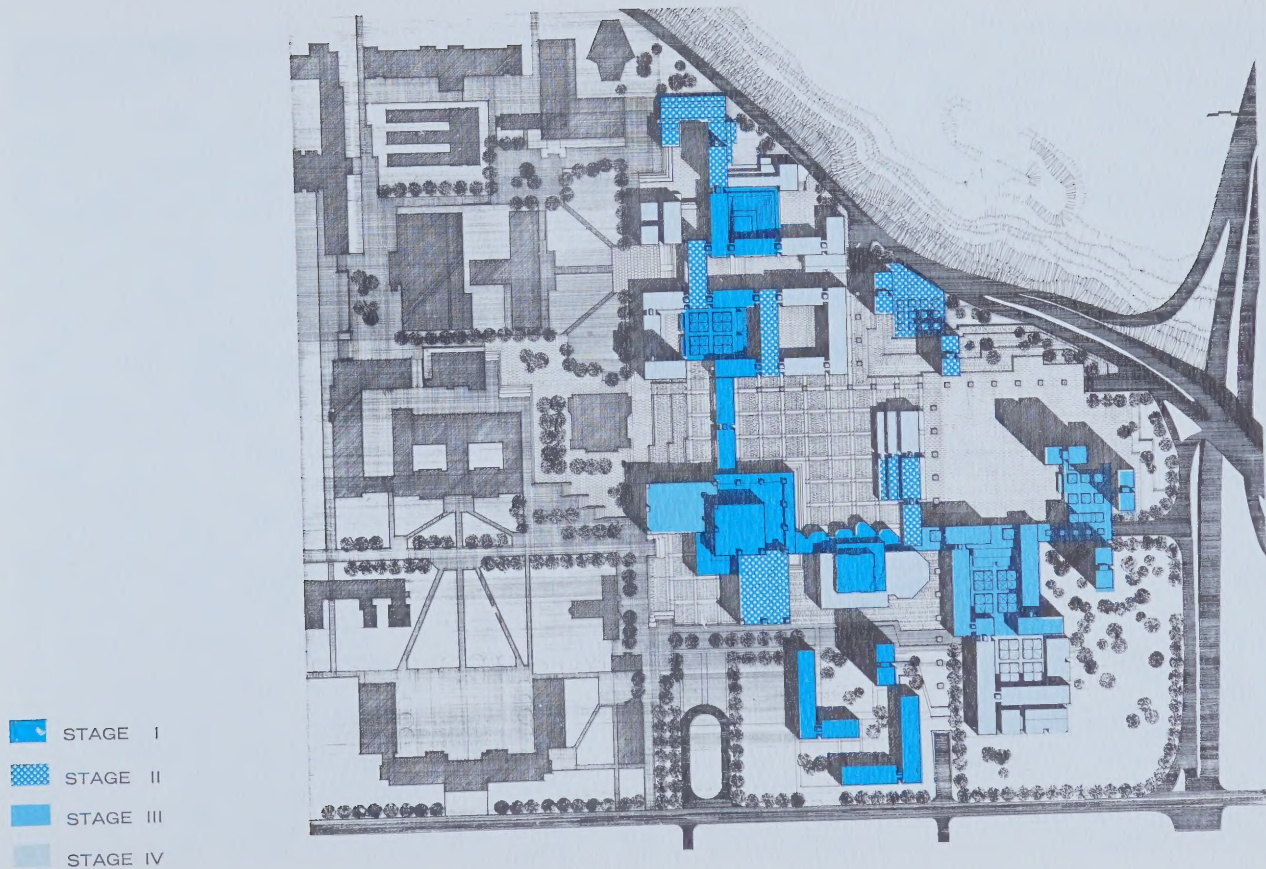
North Garneau is to contain three essentially independent building programs: academic facilities, housing and parking. Each is dependent to a very large degree on policy decision which include the operational goals established early in the formation of the Development Plan.

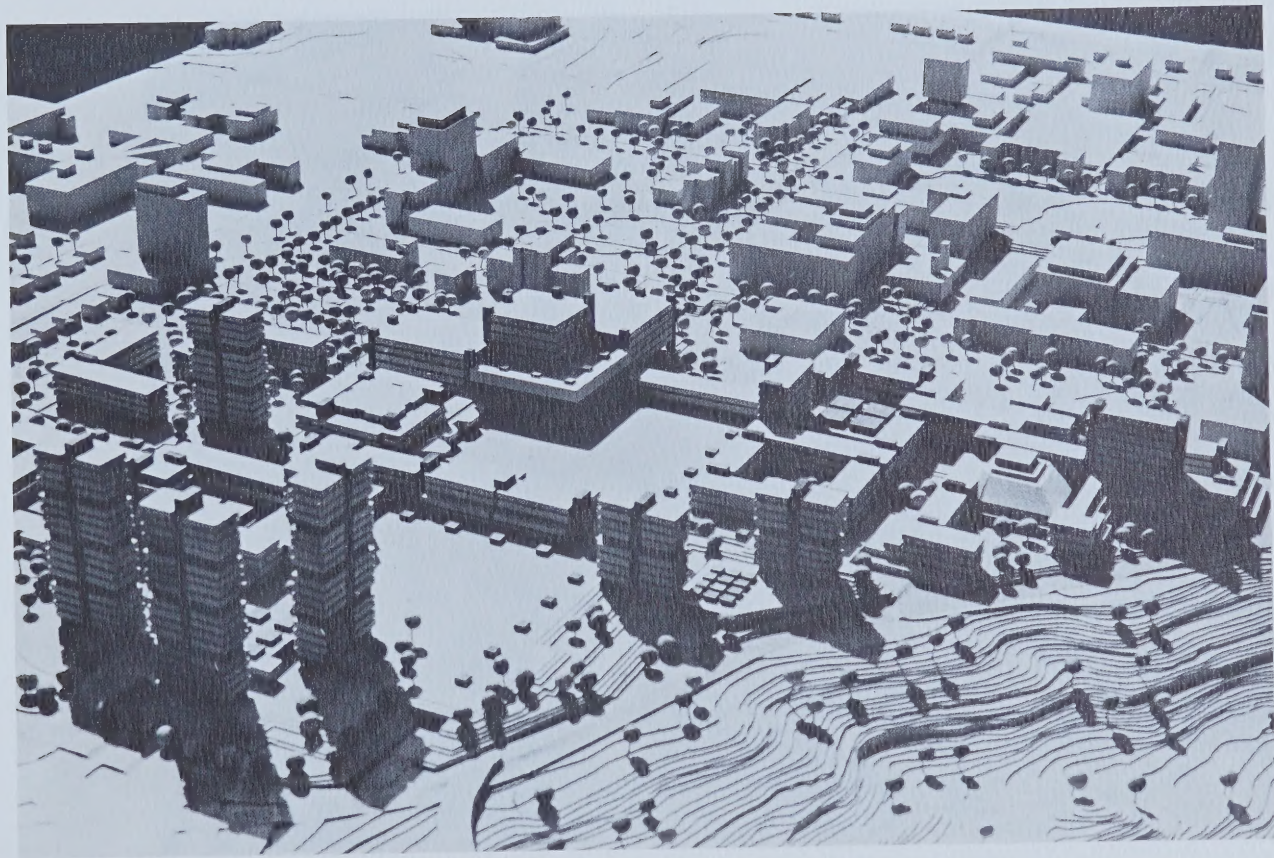
In the implementation of the plan the following phasing objectives should be adhered to:

1. Growth of academic facilities should be established from nodal points.
2. The linkage between the nodes should be established as soon as possible in order to establish the Pedestrian Easement System.
3. Housing can be developed in three major stages allowing a diversity of housing types.
4. The parking phasing program should acknowledge the existing street pattern so as to —
 - a) minimize investment in temporary road construction;
 - b) minimize disruption of existing utilities to the remaining North Garneau residential area;
 - c) utilize the landscaping of the existing boulevards.

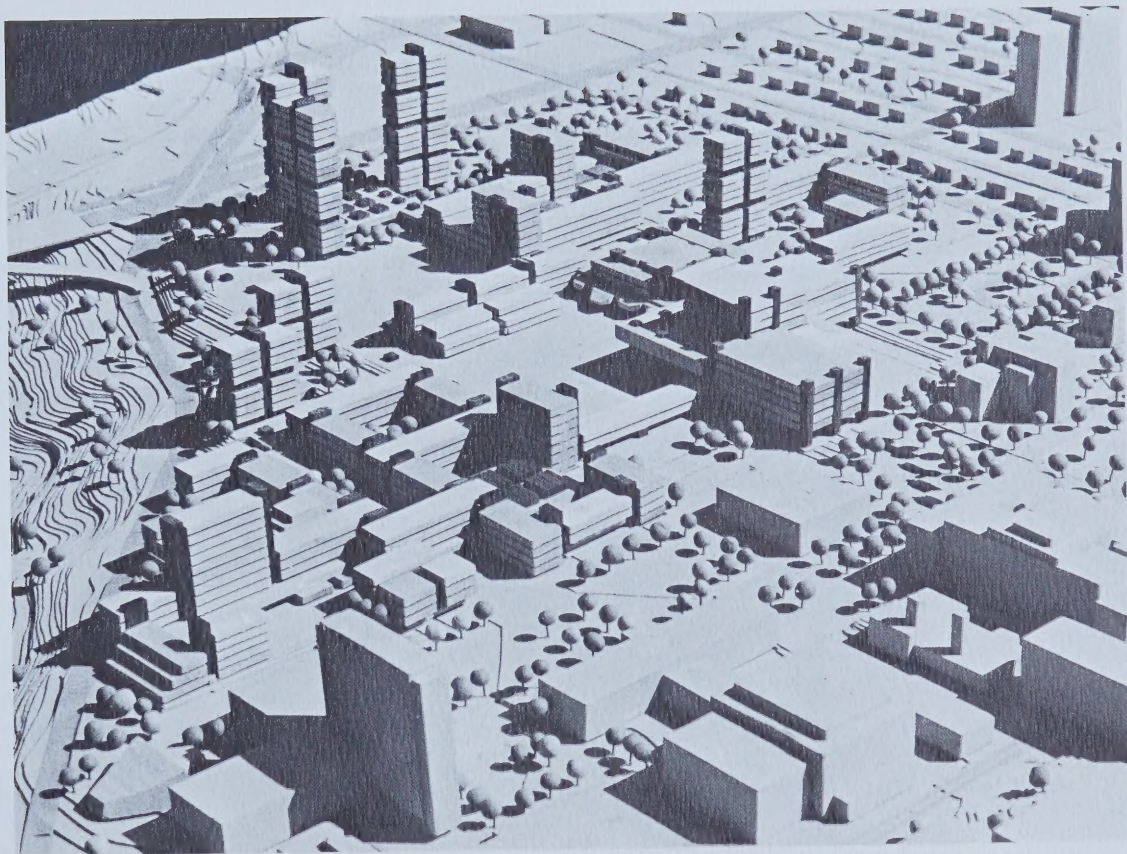
The particular series of growth increments shown indicates how North Garneau might be expected to develop. The building forms illustrated should only be regarded as indicators not as actual models, as specific future teaching and research requirements and changes in building technology cannot be forecast. The plan allows the first stage to be established as a microcosm of the whole project and establishes the principles of growth. As the project begins to develop, the plan must be continuously reviewed.

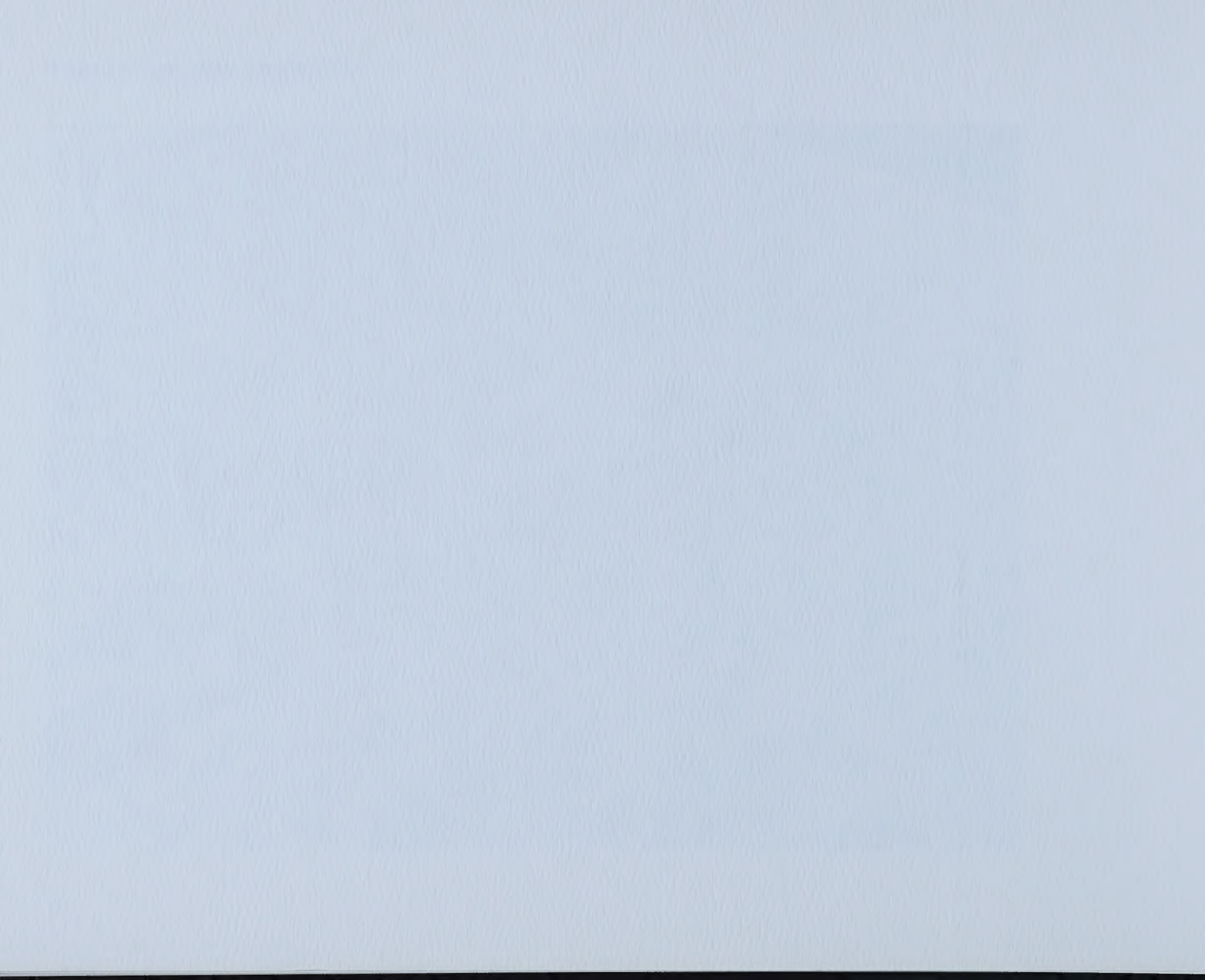
INCREMENTAL GROWTH



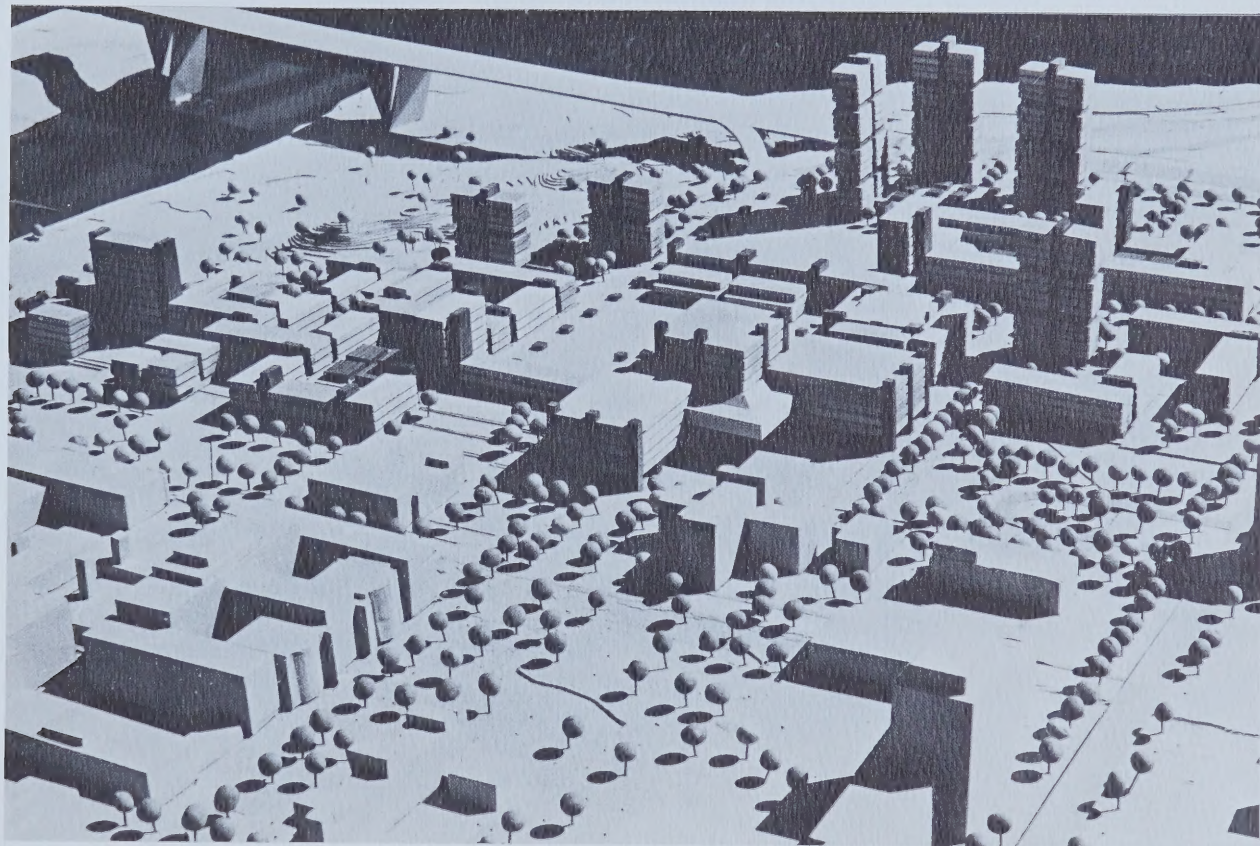


VIEW FROM THE NORTH-WEST





VIEW FROM THE SOUTH-WEST



PERSPECTIVE OF NORTH GARNEAU



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1962.

BITTORF-PINCKSTON PLANNING CONSULTANTS

Planning Team

Rodney Kay

Larry Loh

Guy Maron

Garry Nielsen

Kaien Shimizu

Larrie Taylor

Bruce Watt

Technical Staff

Peter Bull

Gordon Davies

Ron Dixon

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